

REMARKS

Claims 1-17 are pending in the application, with all claims rejected.

Specification

The disclosure is objected to because on page 7, lines 9-11, the serial number of the co-pending application is missing. Applicant has hereby amended the specification to include the serial number.

Claim Objections

Claim 11 is objected to because the search components are labeled with “(b)” twice. Applicant has hereby amended claim 11 to correct this error.

Claim Rejections - 35 U.S.C. § 102 and 103

Claims 1, 2, 5-9, 11-13, 16, and 17 are rejected under 35 U.S.C. § 102(b) as being anticipated by Lomp et al. (U.S. Patent No. 5,796,776). Claims 3, 4, 10, 14, and 15 are rejected under 35 U.S.C. § 103 as being unpatentable over Lomp in view of Latva-aho et al. (U.S. Patent No. 5,654,980).

The present invention generally relates to a method and apparatus for correlating a first data sequence with a local code sequence in a spread spectrum communication system so that a mobile station may identify a serving base station. Referring to Fig. 2A, for example, the apparatus has a first sub-chip delay circuit 205a that generates a second data sequence that is offset by a fraction (e.g., $1/k$) of a chip relative to the first data sequence. A first despreader circuit 215 despreads the first data sequence with the local code sequence (on line 205) to produce a first despread result. A second despreader circuit 215 despreads the second data sequence with the local code sequence to produce a second despread result. And a first sum-and-accumulate circuit adds only the first despread result and the second despread result to produce a first summed result. This summed result, which may then be compared against pre-determined threshold value(s) and analyzed by

code correlation algorithms to detect whether there is a code match, allows a code match to be more easily detected by code correlation algorithms and reduces a probability of a missed identification by a serving station.

The present invention may additionally include a second sub-chip delay circuit 205a that generates a third data sequence that is offset by one half of a chip relative to the second data sequence and by one chip relative to the first data sequence, a third despreader circuit 21 that despreads the second offset data sequence with the local code sequence to produce a third despread result, and a second sum-and-accumulate circuit that adds only the second despread result and the third despread result to produce a second summed result and accumulates the second summed result over a pre-determined period of time to generate a second accumulated result.

Neither of the applied references teaches or suggests a sum-and-accumulate circuit that adds only a first and second despread result, as required by each of the claims. The applied references also do not suggest a second sum-and-accumulate circuit that adds only a second and third despread result, as additionally required by claims 2-4, 12, 13, 16, and 17.

Lomp is directed to a code sequence generator in a CDMA modem. The Examiner specifically refers Applicant to Fig. 17, and col. 31, lines 26-41, which describes a pilot RAKE in which the results from all despreader (1901, 1902, 1903, ... 1910, and 1911) are combined in combiner 1921. Since the combiner combines results from all despreader, it does not add only a first and second despread result. Moreover, the combiner also does not add only a second and third despread result. Thus, the claims are patentable over Lomp for at least this reason.

Latva-aho, which is directed to a receiver that is implemented on the RAKE principle, was cited by the Examiner as allegedly teaching monitoring code phases in half-a chip intervals. Latva-aho fails to make up for Lomp's deficiencies. Latva-aho teaches a combiner 31. But like Lomp, Latva-aho's combiner combines results from all despreader; it does not add only a first and second despread result, and it also does not add only a second and third despread result. Thus, the claims are patentable over both of the applied references.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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